

Perception of premarital counseling among King Khalid University students

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ABSTRACT

Background: Genetic blood disorders are common in Arab countries which are related to many physical and mental disorders. Premarital counseling has been one of the strongest ways to prevent hereditary diseases. It can provide a capability to intervene according to identified risks, vaccinations, genetic consulting, nutrition, consulting regarding behavior and advice regarding contraception. This study aimed to assess university students' knowledge, attitude and practice of pre-marital counseling (PMC) in King Khalid University. **Methodology:** A cross-sectional study was conducted at King Khalid University in Abha city from May to August 2018. The students were selected using two stage stratified cluster sampling technique (medical and non-medical). A total sample of 541 students were included. A structured questionnaire with close-ended questions was designed by the authors following an extensive review of the literature on knowledge, practice, and attitude of premarital screening program. The questionnaire was developed in English and then translated to Arabic by experts at the College of Medicine. **Results:** A total sample of 541 students were involved with ages ranged from 18 years to 27 years old and 56.6% at medical colleges. Exact 73.4% of the students were aware of PMC and 95.2% reported its importance. 96.5% of the students reported their willing to do PMC on marriage and 72.1% see that it should be mandatory. **Conclusions:** Nearly three out of each four students had good awareness level regarding PMC. Most of the students have a positive attitude towards PMS and their readiness to adopt the counseling before marriage.

Keywords: Attitude, awareness, genetic blood disorders, practices, pre-marital counseling

Background

Genetic blood disorders are common in Arab countries which are related to many physical and mental disorders.^[1] Sickle cell anemia and thalassemia major are the most frequent inherited

haemoglobinopathies and are a more common all over the world countries.^[2] According to the World Health Organization (WHO), approximately 240 million people are carriers for these disorders and at least 200,000 affected individuals are born annually; approximately equally divided between sickle cell anemia and thalassemia.^[3]

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Premarital counseling has been one of the strongest ways to prevent hereditary diseases, congenital abnormalities and genetic disorders.

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It can provide a capability to intervene according to identified risks, vaccinations, genetic consulting, nutrition, consulting regarding behavior and advice regarding contraception.^[4]

In Saudi Arabia, genetic blood disorders (e.g., sickle cell anemia and thalassemia), constitute a common health problem.^[1] Moreover, consanguineous marriages are encouraged, which increases the risk of children with genetic disorders.^[5,6] A study in KSA to estimate the rate of at-risk marriages and revealed that about 90% of couples in Saudi Arabia at risk of having affected by sickle cell disease and β -thalassemia children still decide to marry.^[7] In addition, some other diseases, e.g., hearing impairment, mental disorders, may result from premarital infections by certain microorganisms like hepatitis B virus or rubella during pregnancy.^[8,9]

Another study in Jeddah City reported low knowledge about the premarital counseling among attendees of governmental outpatient clinics, and most participants (96.0%) agreed on its importance.^[10]

In Oman, Al-Farsi *et al.* showed that 1/3rd of adults attending primary healthcare centers were unwilling to do the premarital counseling even though they had high levels of knowledge.^[11] Moreover, the majority of Omani university students thought that it is important to do premarital counseling.^[12]

Almost 2 decades ago, a study in Abha City reported that 70% of King Khalid university students showed acceptance of premarital counseling while 13% rejected it. The same study revealed Legalization of premarital counseling was agreed on by 19% compared to 41% who refused it.^[12] Therefore, it is important to explore university students' knowledge, attitude, and practice regarding premarital counseling which is the objective of the current study.

Methodology

A cross-sectional study was conducted at King Khalid University in Abha city, which is the capital of Aseer provenance at southern region of Saudi Arabia, from May to August 2018. The students were selected using two stage stratified cluster sampling technique. Stratification factor was the nature of the college (medical and non-medical). Within each strata, 3 colleges were included randomly. Students were then selected by simple random sampling and those willing to participate were enrolled in the study. A total sample of 541 students were included from 600 distributed questionnaires with a response rate of 90.1%. A structured questionnaire with close-ended questions was designed by the authors following an extensive review of the literature on knowledge, practice, and attitude of premarital screening program. The questionnaire was developed in English and then translated to Arabic by experts at the College of Medicine. A pilot study was conducted on a sample of 60 students to assess the reliability of the questionnaire and to check for ease and clarity of items. Questions that were unclear or distracting were then modified.

The students involved in the pilot study were excluded from the final study. A self-reporting questionnaire was distributed to the sampled students after giving brief explanation about the main aims of the study before distributing the questionnaires. The questionnaire consisted of 3 main parts. The first part was on the socio-demographic traits including gender, age, college, academic year, parents' consanguinity and personal and family history of hereditary diseases. The second part tested the students' knowledge regarding premarital screening program. The third part consisted of items that explored the students' attitudes and practice towards premarital screening program. The students were informed that their participation was voluntary and all the information would be confidential. Anonymity and confidentiality was assured and emphasized. Oral consent was obtained from all participants before completing the questionnaires.

Data analysis

After data was collected, it was revised, coded and fed to statistical software IBM SPSS version 20. The given graphs were constructed using Microsoft excel software. All statistical analysis was done using two tailed tests and alpha error of 0.05. P value less than or equal to 0.05 was considered to be statistically significant. Frequency and percent were used to describe the frequency distribution of each category for different variables. Chi square/Mont Carlo exact test and Fishers exact test were used to test for the association between students' characteristics and their awareness level. Exact testes were used if there are small frequencies where chi square is invalid.

Table 1: Bio-demographic data of sampled King Khalid University Students

Demographic data	No	%
Age in years	18-21	181 33.5%
	22-24	319 59.0%
	25+	41 7.6%
Gender	Male	399 73.8%
	Female	142 26.2%
Study field	Non-Medical	235 43.4%
	Medical	306 56.6%
Academic Year	First Year	27 5.0%
	Second Year	41 7.6%
	Third Year	129 23.8%
	Fourth Year	120 22.2%
	Fifth Year	115 21.3%
	Sixth Year	109 20.1%
Family Income	Low	36 6.7%
	Average	439 81.1%
	High	66 12.2%
Social status	Single	501 92.6%
	Married	40 7.4%
Is there a genetic disease in the family?	Yes	58 10.7%
	No	483 89.3%
Is there a family relationship between your parents?	Yes	156 28.8%
	No	385 71.2%
Type Of Consanguinity	Cousin (Father's side)	113 72.4%
	Cousin (Mother's side)	43 27.6%

Results

A total sample of 541 students were involved with ages ranged from 18 to 27 years old, and 73.8% of the sampled students were males. Exactly 56.6% were in medical colleges. About 81% of the students were of families with average income, whereas 7.4% were married. Genetic diseases in the students' families were recorded among 10.7% while 28.8% of the students' parents were with consanguinity of which 72.4% from father side [Table 1].

Table 2 shows the students awareness details regarding PMC. Exact of 76% of the students know about premarital screening and 72.1% know it should be mandatory. About 69% of the students know the role of PMC in preventing genetic disorders. About 70% of the sampled students recorded no reasons to avoid PMC and 85.2% agreed on the importance of medical care

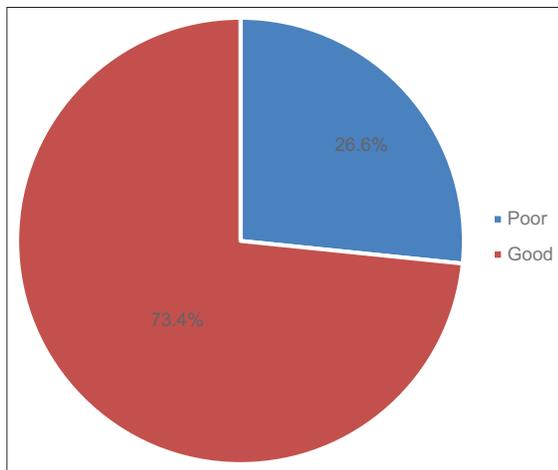


Figure 1: Overall awareness regarding pre-marital counselling among sampled King Khalid University Students

Awareness items	No	%
Know what pre-marital screening	411	76.0%
Pre-marital screening mandatory	390	72.1%
The aims of pre-marital screening		
Don't know	43	7.9%
Prevention of genetic diseases	377	69.7%
Prevention of infectious diseases	115	21.3%
Couple health	6	1.1%
Know what sickle cell anemia is	398	73.6%
Know what Thalassemia (Mediterranean anemia)	250	46.2%
Know what viral hepatitis B	333	61.6%
Know what viral hepatitis C	306	56.6%
Know the ways of transmitting HIV	499	92.2%
The results of the examination affect the continuation of the marriage	424	78.4%
There are no reasons to prevent pre-marital screening	381	70.4%
Screening should be mandatory	486	89.8%
It is dangerous to marry relatives	333	61.6%
Medical advice after pre-marital screening is necessary	461	85.2%

with PMC. Exact 92.2% of the students know the method of transmission of HIV and 73.6% know about sickle cell anemia. Generally, 73.4% of the students were aware of pre-marital counseling [Figure 1].

As for attitude of students towards PMC [Table 3], 95.2% of the students think pre-marital screening is important and 94.1% of the students agreed on their acceptance of PMC. Exact 93% of the students think pre-marital screening goes beyond personal freedom while 88.7% of the students think that premarital screening may be contrary to some of the teachings of Islam, while 91.1% of them think that premarital screening contravenes customs. About 85% of the students will not consider marriage if asked to do a premarital screening, and 40% considered premarital screening to be an insult.

With regard to practice [Table 4], 96.5% of the students wanted to do PM screening when they get married and 87.5% of married students did PMC before marriage.

Finally on relating PMC awareness with students characteristics [Table 5], 80.5% of students aged 25 years or more recorded

Table 3: Attitude regarding pre-marital counselling among sampled King Khalid University Students

Attitude items	No	%
Do you think pre-marital screening is important?	515	95.2%
Do you support preventing the marriage of someone with a genetic disease?	388	71.7%
Do you think that pre-marital screening contravenes customs?	493	91.1%
Do you think pre-marital screening goes beyond personal freedom?	503	93.0%
Do you think that pre-marital screening may be contrary to some of the teachings of Islam?	480	88.7%
To what extent your acceptance of pre-marital screening?		
Agree	509	94.1%
Neutral	27	5.0%
Disagree	5	0.9%
I will consider not marrying if I am asked to do a pre-marital screening.		
Agree	35	6.7%
Neutral	42	8.0%
Disagree	448	85.3%
If you accept a pre-marital screening, what are the reasons?		
To avoid the transmission of any hereditary diseases to my children	383	75.2%
To make sure that the person I want to marry is healthy	87	17.1%
To ensure my safety	22	4.3%
Other reasons	17	3.3%
If you do not accept a pre-marital screening, what are the reasons?		
I do not want to interfere in God's will and destiny	6	18.8%
I am afraid to discover that the results of a pre-marital screening may hinder the completion of marriage	9	28.1%
The family may refuse to complete the marriage on the basis of the results of the pre-marital screening	4	12.5%
A pre-marital screening is an insult	13	40.6%

good awareness compared to 56.9% of students below the age of 21 years with recorded statistical significance ($P = 0.001$). As for gender, 86.6% of female students had good awareness level compared to 68.7% of males ($P = 0.001$). Considering college nature, 90.5% of medical students' had good awareness level compared to 51.1% of non-medical students with significant difference. Married students recorded significantly higher awareness level than non-married (90% vs. 72.1%, respectively). Exact 76.7% of students who think in importance of PMC recorded good awareness compared to 7.7% of who did not ($P = 0.001$). Also 75.3% of students who willing to do PMC

had good awareness level compared to 21.1% of others who did not ($P = 0.001$). Exact of 86% of students who performed PMC before marriage had good awareness compared to 54.2% of those who were single ($P = 0.013$).

Discussion

Across the world, genetic screening programs are conducted either before or after birth or in adults before conception but while they are married and able to reproduce.^[13] Premarital screening can potentially reduce the burden of inherited hemoglobin diseases b reducing the number of high-risk marriages.^[14]

The Saudi community is basically a tribal society with a high proportion of consanguineous marriages, which means that the recessive genes have been able to survive, concentrate, and exhibit disease in these populations over the centuries.^[15]

Our study reveals large number were aware of premarital counseling and conceptualized that it should be made mandatory

Table 4: Practice regarding pre-marital counselling among sampled King Khalid University Students, Abha, 2018

Practice	No	%
Do you want to do this screening when you get married?		
No	19	3.5%
Yes	522	96.5%
If you are married have you had a pre-marital screening?		
Yes	35	87.5%
No	10	12.5%

Table 5: Relation between students' characteristics and their awareness regarding pre-marital counseling among sampled King Khalid University Students

Factors		Knowledge level				P
		Poor		Good		
		No	%	No	%	
Age in years	18-21	78	43.1%	103	56.9%	0.001*
	22-24	58	18.2%	261	81.8%	
	25+	8	19.5%	33	80.5%	
Gender	Male	125	31.3%	274	68.7%	0.001*
	Female	19	13.4%	123	86.6%	
Study field	Non-Medical	115	48.9%	120	51.1%	0.001*
	Medical	29	9.5%	277	90.5%	
Academic Year	First Year	17	63.0%	10	37.0%	0.001*
	Second Year	25	61.0%	16	39.0%	
	Third Year	44	34.1%	85	65.9%	
	Fourth Year	39	32.5%	81	67.5%	
	Fifth Year	9	7.8%	106	92.2%	
	Sixth Year	10	9.2%	99	90.8%	
Family Income	Low	10	27.8%	26	72.2%	0.149
	Average	123	28.0%	316	72.0%	
	High	11	16.7%	55	83.3%	
Social status	Single	140	27.9%	361	72.1%	0.013*
	Married	4	10.0%	36	90.0%	
Is there a genetic disease in the family?	Yes	11	19.0%	47	81.0%	0.163
	No	133	27.5%	350	72.5%	
Is there a family relationship between your parents?	Yes	43	27.6%	113	72.4%	0.751
	No	101	26.2%	284	73.8%	
Do you think pre-marital screening is important?	No	24	92.3%	2	7.7%	0.001*
	Yes	120	23.3%	395	76.7%	
Do you want to do this screening when you get married?	No	15	78.9%	4	21.1%	0.001*
	Yes	129	24.7%	393	75.3%	
If you are married have you had a pre-marital screening?	Yes	7	14.0%	43	86.0%	0.013*
	No	11	45.8%	13	54.2%	
	Not Married	126	27.0%	341	73.0%	

* $P < 0.05$ (significant)

for the couples who are planning to get marry to avoid future risk of genetic disease like thalassemia etc. Our finding were in agreement of other study done by Essa *et al.*^[16,17] who reported that the attitude of the students towards the premarital screening was found significantly higher in relation to its importance and many participants were agreed on this statement that it helps in preventing the marriage of someone with genetic disorders and not interfering with customs and similar understanding was observed by Al- Fassti *et al.*^[11] However, acceptance of premarital counseling was found satisfactory among participants in order to prevent genetic diseases and this study also explored the reason for the acceptance showed that the many individuals wants to marry a healthy person and avoid to transmit of any hereditary diseases to their children was seen in agreement of other study conducted by Al-Kahtani.^[9]

Conclusions

In conclusion, nearly three out of each four students had good awareness level regarding PMC. Also, the study showed that most of the students have a positive attitude towards PMS and their readiness to adopt the counseling before marriage. Even though the vast majority of them thought it is important to carry out PMS and agreed to do it, Three quarters of the students agreed that it should be made a mandatory procedure before marriage. Health education programs with medical advice and community attitude are required for improving knowledge and attitude towards PMS.

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Conflicts of interest

There are no conflicts of interest.

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